

Ser. No. 10/536,829
Docket No. Y31-184577C/KK
NGB.534

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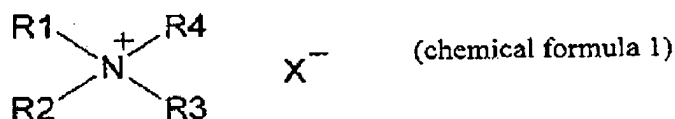
AMENDMENTS TO THE SPECIFICATION

Please amend the first paragraph on page 8 as follows:

Namely, the nonaqueous electrolyte of the invention, ~~as described in claim 1~~, comprises an organic solvent and a lithium salt dissolved therein, and is characterized by containing at least one quaternary ammonium salt in an amount of 0.06 mol/L or larger and 0.5 mol/L or smaller. Due to this constitution, a nonaqueous electrolyte capable of realizing a battery having a high charge/discharge efficiency and excellent high-rate discharge characteristics can be provided.

Please amend the second paragraph on page 8 (and bridging pages 8 and 9) as follows:

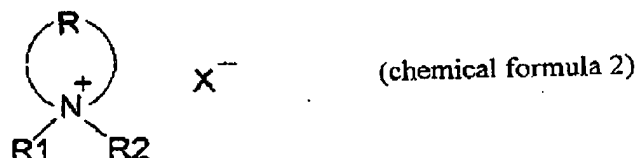
The nonaqueous electrolyte of the invention, ~~as described in claim 2~~, may be characterized in that the quaternary ammonium salt has a structure represented by any of (chemical formula 1), (chemical formula 2), and (chemical formula 3):



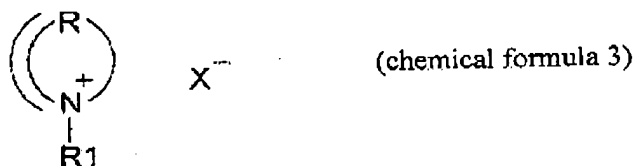
(wherein R1, R2, R3, and R4 each are either an alkyl group having 1-6 carbon atoms or an alkyl group in which at least part of the hydrogen atoms have been replaced by a fluorine atom; and X⁻ is a fluorine-containing anion)

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(wherein R is a divalent organic linking group having a main chain which has 4-5 atoms and is constituted of at least one member selected from carbon, oxygen, nitrogen, sulfur, and phosphorus; R1 and R2 each are either an alkyl group having 1-6 carbon atoms or an alkyl group in which at least part of the hydrogen atoms have been replaced by a fluorine atom; and X⁻ is a fluorine-containing anion)



(wherein R is an organic linking group or an organic linking group forming an aromatic ring, the organic linking groups each having a main chain which has 4-5 atoms and is constituted of at least one member selected from carbon, oxygen, nitrogen, sulfur, and phosphorus and having one single-bond end and one double-bond end; R1 is an alkyl group having 1-6 carbon atoms or an alkyl group in which at least part of the hydrogen atoms have been replaced by a fluorine atom; and X⁻ is a fluorine-containing anion).

Please amend the second paragraph on page 10 as follows:

Furthermore, the nonaqueous electrolyte of the invention, ~~as described in claim 3,~~ may be characterized by containing one or more organic solvents selected from the group consisting of ethylene carbonate, propylene carbonate, butylene carbonate, γ -butyrolactone, and γ -valerolactone.

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Please amend the paragraph bridging pages 10 and 11 as follows:

Moreover, the nonaqueous electrolyte of the invention, ~~as described in claim 4,~~ may be characterized in that the anion species contained in the nonaqueous electrolyte is one or more members selected from the group consisting of BF_4^- , PF_6^- , CF_3SO_3^- , $\text{N}(\text{CF}_3\text{SO}_2)_2^-$, $\text{N}(\text{C}_2\text{F}_5\text{SO}_2)_2^-$, $\text{N}(\text{CF}_3\text{SO}_2)(\text{C}_4\text{F}_9\text{SO}_2)^-$, $\text{C}(\text{CF}_3\text{SO}_2)_3^-$, and $\text{C}(\text{C}_2\text{F}_5\text{SO}_2)_3^-$.

Please amend the second paragraph on page 11 as follows:

The nonaqueous-electrolyte battery of the invention, ~~as described in claim 5,~~ comprises a positive electrode, a negative electrode, and a nonaqueous electrolyte, and is characterized by having been fabricated using the nonaqueous electrolyte described above. Due to this constitution, a nonaqueous-electrolyte battery can be provided in which the effects of the invention described above are produced.

Please amend the paragraph bridging pages 11 and 12 as follows:

Furthermore, the nonaqueous-electrolyte battery of the invention, ~~as described in claim 6,~~ may be characterized in that the negative electrode employs a graphite. Due to this constitution, although a graphite is used as a negative-electrode material, first charge can be conducted while effectively inhibiting the decomposition of the organic solvent constituting the nonaqueous electrolyte. This constitution further brings about an improvement in high-rate discharge characteristics. Consequently, by using a graphite in the negative electrode, a nonaqueous-electrolyte battery can be provided which sufficiently takes advantage of that property of a graphite negative electrode material which is the property of showing a flat potential change to enable a high energy density.

Please amend the first full paragraph on page 12 as follows:

Moreover, the nonaqueous-electrolyte battery of the invention, ~~as described in claim 7,~~ may be characterized by having a sheath comprising a metal/resin composite material. In this

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constitution, even though the sheath is made of a flexible material, there is no possibility that the battery might swell during charge because the nonaqueous electrolyte in the battery system of the invention can be effectively inhibited from decomposing during charge due to the functions described above and, hence, almost no gas generation occurs during charge. Consequently, a sheath comprising a lightweight metal/resin composite material can be employed and a nonaqueous-electrolyte battery having a further improved energy density can hence be provided.